

Governor's STEM Academy Brief



Office of Career and Technical Education Services

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The purpose of this monthly brief is to provide information, resources, and a networking vehicle to support the STEM (science, technology, engineering, and mathematics) Academies in Virginia.

GOVERNOR'S STEM ACADEMIES SPOTLIGHT

Loudoun Governor's Career and Technical Academy (Loudoun County Public Schools) receives \$2,500—The Automotive Servicing Department at Monroe Technology Center, with assistance from Northern Virginia Community College, receives an annual \$2,500 grant from Volkswagen/Audi to purchase specialized tools for training on previously donated vehicles. This endowment helps ensure that each year approximately 40 Monroe students are up to date on current industry tools.

CAREER LINKS

The January 2012 Trailblazers newsletter (available at www.ctetrailblazers.org/newsletter) focuses on career clusters.

- **Career Clusters Predictions: Employment Opportunities in 2018**
<http://ctetrailblazers.blogspot.com/2012/01/career-cluster-predictions-employment.html>
- **How the Recession Affected Occupations in Virginia**, a comparison of Virginia employment in 2006 and 2010
<http://ctetrailblazers.blogspot.com/2012/01/how-recession-affected-occupations-in.html>

FOCUS ON INFORMATION TECHNOLOGY CAREER CLUSTER

- [Apple in Education](#) offers links to the [Challenge-Based Learning](#) and the accompanying [Classroom Guide](#), as well as [How Notebook Computers, Digital Media, and Probeware Can Transform Science Learning in the Classroom](#).
- [Access Computing: Resources for Faculty, Staff, and Employers](#) provides links to help educators and employers “make courses and programs fully inclusive of students with disabilities.” See especially the links to [Promising Practices](#) and [Universal Design of Computer Departments](#).
- [Computer Science Teachers Association](#) offers [Curriculum Resources](#), [Highlighted Resources](#), and [Brochures, Posters, Videos](#).
- [Exploring Computer Science: Teaching Resources](#) addresses computational thinking, problem solving, Web design, and robotics.
- [Gartner 2012 Information Technology Predictions and Trends](#), [20 Most Anticipated Tech Products of 2012](#) (CIO.com), and [The Top Ten Technology Trends for 2012](#) (from NBC Action News) provide updates on information technology trends for 2012.
- [Graphic Design & Publishing Center](#) provides daily news related to the graphic design field, helping teachers and students keep current with trends and issues.
- [Intel: Designing Effective Projects](#) offers detailed plans for a variety of technology-based [K-12 interdisciplinary projects](#) and provides related instructional resources for project design, thinking skills, and instructional strategies.
- [Microsoft in Education: Teacher Resources](#) links to secondary and postsecondary instructional resources that include lesson plans, project tutorials, and teacher guides.

- [Ohio Inquiry-Based Instructional Units: Information Technology](#) provides units of instruction that include an essential question and instructional resources for student teams to complete real-world projects.
- [Oracle: Young Developer Learning Path](#) moves from beginner-level to more advanced resources for teaching students the Java platform. It includes Greenfoot, BlueJ, NetBeans IDE BlueJ Edition, and links to basic [Java tutorials](#).
- [STEM Transitions Integrated Projects](#) links educators to STEM projects combining information technology (i.e., interactive media, networking systems, and programming) with mathematics and science at
- [Teachers Network.org: Technology Lessons for High School](#) provides information on how to use digital media and other technologies to develop interdisciplinary lessons and projects.
- [Utah Education Network: CTE/Business Education Lessons](#), a business technology site, includes lessons for many IT-related courses (e.g., Computer in Business, Business Web Page Design, Computer Technology, Desktop Publishing, and Digital Business Applications). [Please note publishing dates for lessons, because some are more current than others.]

Focus inks provided by Virginia's CTE Resource Center, <http://www.cteresource.org/>

GRANTS AND OPPORTUNITIES

- **Economics and Financial Education Training Grant**—Classroom educators who teach or will be teaching junior high or high school financial education are eligible to apply for a grant to attend the 2012 Family Economics and Financial Education (FEFE) Empowering Future Generations [National Educator Training](#) to be held June 25-28, 2012 at the Omni Tucson National Resort.
- **Grant Databases**
<http://www.schoolfundingcenter.net> (school grants of all types)
<http://www.grants.gov> (federal school grants)
<http://www.foundationcenter.org> (foundation school grants)
- **STEM Essay Contest**—The Virginia Council on the Status of Women (VCSW) is sponsoring the 2012 STEM essay contest for young women in high school. The winner will receive a \$5,000 scholarship to an institution of higher learning. The entries are due on February 20, 2012. To enter, young women should be in their junior or senior year in high school and have at least a 2.5 grade point average. The guidelines and submission details are located at https://www.dss.virginia.gov/community/council_women/index.cgi

INSTRUCTIONAL STRATEGIES

A recommended Web site from a Harvard grad school student for helpful and time-saving lesson plans and a library of curriculum from/for teachers is <http://betterlesson.com/>.

For more information, contact Judith Sams, editor, Office of Career and Technical Education Services, at cte@doe.virginia.gov or by telephone at 804-225-2052.